UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Washington, D.C. 20235

APR 5 1984

F/M11:AMA

TO: Distribution*

FROM: F/M11 - William P. Jensen

SUBJECT: Amendment 13 to the Fishery Management Plan for Gulf of Alaska Groundfish

Attached for your review and comment is Amendment 13 and the draft proposed rule. Please submit any comment by 20 APR 84.

This amendment will permanently incorporate two provisions recently implemented by emergency rule: (a) increasing the pollock OY for the Western and Central Regulatory Areas, and (b) combining those two areas into one for managing the pollock fisheries.

The environmental and economic analyses of the emergency rule apply to this amendment and are incorporated by reference. The Alaska Region has determined that this amendment is consistent with the Coastal Zone Management Plan for the State of Alaska and has submitted its finding to the appropriate state office.

Please contact Aven Andersen (634-7449) if you have any questions.

Attachment

*Distribution (Names with asterisks already have the attachment)

F/CA - Hutton
F/MI - Finch, Fricke
F/Mx1 - Pallozzi*
F/M11 - Jensen*, Martenson*, Surdi, and Stone
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GCF - -appropriate attorney*
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F/M3
F/42 - Rublemann
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F/S21 - Holliday*
PP2 - Bigford
N/ORM4 - Evans

Revised + Checked 4/23/84 No objection.

F/MI

Billing Code 3510-22

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 672

[Docket No.]

Groundfish of the Gulf of Alaska

AGENCY: National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Proposed Rule.

SUMMARY: NOAA issues a proposed rule to implement Amendment 13 to the fishery management plan for Groundfish of the Gulf of Alaska. This amendment adjusts the management of the pollock resource by establishing a combined optimum yield (OY) for this species in the Western and Central Regulatory Areas of the Gulf of Alaska and increasing the combined OY from 200,000 metric tons (mt) to 400,000 mt. This action is intended to allow both the harvest of the increased surplus production of the pollock resource and the distribution of fishing effort according to pollock availability.

DATE: Comments on the amendment and proposed rule are invited until [insert date 75 days after initiation of Secretarial review].

ADDRESSES: Comments should be mailed to Robert W. McVey, Director, Alaska Region, National Marine Fisheries Service, P.O. Box 1668, Juneau, Alaska 99802, or delivered to Room 453, Federal Building, 709 West Ninth Street, Juneau, Alaska. Copies of the amendment and the environmental assessment/initial regulatory flexibility analysis may be obtained from the North Pacific Fishery Management Council, P.O. Box 103136, Anchorage, Alaska 99510, telephone 907-274-4563.

FOR FURTHER INFORMATION CONTACT: Ronald J. Berg (Fishery Management Biologist, National Marine Fisheries Service, Alaska Region), 907-586-7230.

SUPPLEMENTARY INFORMATION:

Background

The domestic and foreign fisheries in the 3-200 mile fishery conservation zone of the Gulf of Alaska are managed under the Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP). The FMP was developed by the North Pacific Fishery Management Council (Council), approved by the Assistant Administrator for Fisheries, NOAA (Assistant Administrator), on February 24, 1978, and implemented by "final rule," effective December 1, 1978 (43 FR 52709, November 14, 1978). Eleven amendments to the FMP have been approved and implemented. A twelfth amendment that addresses the domestic sablefish longline fishery has been approved by the Council, but has not yet been submitted for Secretarial review.

Amendment 13 to the FMP is the subject of this action and was adopted by the Council at its December 7-9, 1983, meeting. The amendment proposes (1) to combine the pollock OYs established for the Western and Central Regulatory Areas of the Gulf of Alaska ("Regulatory Area" is hereinafter called "Area"); and (2) to increase the combined OY from 200,000 mt to 400,000 mt and the reserve from 40,000 mt to 80,000 mt. Because the OY for "other species" is calculated as five percent of the sum of the upper range of the target species' OYs, it is also increased from 18,718 mt to 28,780 mt, and the reserve for this species category is increased accordingly from 3,744 mt to 5,756 mt. The increased pollock OY (minus reserves) would be apportioned such that domestic annual processing (DAP) = 9,000 mt; joint venture processing (JVP) = 210,300 mt; and total allowable level of foreign fishing (TALFF) = 100,700 mt. The "other species" OY would be apportioned such that DAP = 100 mt; JVP = 400 mt; and TALFF = 22,524 mt. These apportionment figures are based on a National Marine Fisheries Service (NMFS) survey of the amounts of the respective OYs that will be used by the U.S. industry during 1984. The projected 1984 DAP amount for pollock presented by NMFS to the Council when it adopted Amendment 13 was 24,360 mt for the Western and Central Areas. This latter DAP figure was later discovered to be overstated by 15,360 mt due to a reporting error submitted to NMFS during its survey. As a result, the initial 1984 DAP was reduced to 9,000 mt and TALFF was therefore increased from 85,340 mt to 100,700 mt. The initial apportionment of the 400,000 mt pollock OY established under this amendment could vary from year to year depending on the amounts used by

the U.S. industry as set forth under the rule implementing Amendment 11 to the FMP (48 FR 43044, September 21, 1983).

The actions proposed under Amendment 13 have been implemented by an emergency rule (49 FR ____, March __, 1984) in order to provide timely optimum harvest of the pollock resource and to prevent undue restriction of and economic hardship to the developing U.S. groundfish fishery. A detailed rationale for establishing a combined pollock OY of 400,000 mt for the Western and Central Areas under Amendment 13 is set forth in the preamble to the emergency rule.

Classification

Section 304(a)(1)(C)(ii) of the Magnuson Act, as amended by Pub. L. 97-453, requires the Secretary of Commerce (Secretary) to publish regulations proposed by a council within 30 days of receipt of the amendment and regulations. At this time the Secretary has not determined that the amendment these rules would implement is consistent with the national standards, other provisions of the Magnuson Act, and other applicable law. The Secretary, in making that determination, will take into account the data, views, and comments received during the comment period.

An environmental assessment/final regulatory flexibility analysis was prepared on the emergency rule that implemented the actions proposed under Amendment 13 during the period the amendment and its rule were being reviewed for implementation. This assessment is also considered to

be the environmental assessment/initial regulatory flexibility analysis (EA/IRFA) for Amendment 13 and concludes that no significant impact on the human environment will occur as a result of this rule. You may obtain a copy of the EA/IRFA from the Council at the address listed above.

The NOAA administrator determined that this proposed rule is not a "major rule" requiring a regulatory impact analysis under Executive Order 12291. He made his decision on the basis of the cost/benefit analysis contained in the EA/IRFA. This proposed rule is exempt from the procedures of E.O. 12291 under §8(a)(2) of that order. Deadlines imposed under the Magnuson Act, as amended by Pub.L. 97-453, require the Secretary to publish this proposed rule 30 days after its receipt. The proposed rule is being reported to the Director, Office of Management and Budget, with an explanation of why it is not possible to follow procedures of the order. This rule, if approved, will have a significant beneficial economic effect on a substantial number of small entities within the meaning of the Regulatory Flexibility Act, 5 U.S.C. §501 et seq. This determination is also based on the analysis contained in the EA/IRFA. The cost/benefit analysis in the EA/IRFA was summarized in the preamble to the emergency rule at 49 FR _____.

This rule does not contain a collection of information requirement for purposes of the Paperwork Reduction Act.

The Council determined that this rule will be implemented in a manner that is consistent to the maximum extent practicable with the

approved coastal zone management program of the State of Alaska. This determination has been submitted for review by the responsible State agencies under section 307 of the Coastal Zone Management Act.

List of Subjects

Fish, Fisheries, Reporting and recordkeeping requirements.

Dated:

Carmen J. Blondin
Deputy Assistant Administrator for
Fisheries Resource Management
National Marine Fisheries Service

For the reasons set out in the preamble, 50 CFR Part 672 is amended as follows:

Part 672 - Groundfish of the Gulf of Alaska

1. The authority citation for Part 672 reads as follows:

AUTHORITY: 16 U.S.C. 1801 et seq.

2. In §672.20, Table 1, the entries for pollock and "other species" are revised to read as follows:

Table 1.- Initial (as of January 1, each year) Optimum Yield (OY), Domestic Annual Harvest (DAH), Domestic Annual Processing (DAP), Joint Venture Processing (JVP), Reserve, and Total Allowable Level of Foreign Fishing (TALFF) all in metric tons.

Species	Species Code	Areas	OY	DAH	DAP	JVP	Reserve	TALFF
Gulf of Alaska Groundfish Fishery:								
Pollock	701	Western/Central[1/]	400,000	219,300	9,000	210,300	80,000	100,700
		Eastern[1/]	16,600	300	300	0	3,320	12,980
		Total	416,600	219,600	9,300	210,300	83,320	113,680
* * *								
Other Species[5/]	499	Total	28,780	500	100	400	5,756	22,524

* * *

5/ The category "other species" includes sculpins, sharks, skates, smelts, capelin, and octopus. The OY is equal to 5% of the upper range of the target species OYs.

* * * * *

SSALVESON:gcs 2-10-84 File: 900-03

NORTH PACIFIC FISHERY MANAGEMENT COUNCIL
FISHERY MANAGEMENT PLAN FOR THE
GULF OF ALASKA GROUNDFISH

Amendment #13

Changes to the FMP

I. SUMMARY

Amendment #13 was approved by the Council at its December 7-9, 1983 meeting. The amendment makes the following changes to the FMP:

1. The Western and Central Regulatory Areas are combined into one unit for pollock management only.

2. The pollock Optimum Yield (OY) in the combined Western and Central areas is increased from 200,000 mt to 400,000 mt.

II. CHANGES TO RELEVANT SECTIONS OF THE FMP

(1) Amend the figures and tables of the FMP as per instructions listed below:

a. Renumber all figures by section and sequence within.
Example: Figure 1 becomes Figure 3.1, for first figure in Section 3.

b. Replace Table 58 with revised table numbered Table 4.2 attached here.

c. Replace Table 61 and Table 61a with revised numbered Table 5.3 attached here.

d. Delete Tables 62, 63, 64, 66 and replace with tables numbered Table 6.1 and 6.3.

e. Change Table 65 to read Table 6.2.

f. Renumber all tables by section and sequence within.
Example: Table 67 becomes Table 11.1, for first table in Section 11.

(2) Revise the following sentence in the FMP summary:

Page S-1, Paragraph 5. Change the last sentence to read, "The total optimum yield is expected to be as much as 604,385 mt.

(3) In the summary entitled "History of Amendments," page S-5, add summaries of Amendments #10-13.

(4) In Section 3.1, page 3-1, "Area and Stocks Involved," replace the first paragraph with the following paragraph:

The Gulf of Alaska is defined to include that portion of the North Pacific Ocean exclusive of the Bering Sea, between the eastern Aleutian Islands at 170°W. longitude and Dixon Entrance at 132°40'W. longitude and includes the following regulatory areas: Western, Central, and Eastern (Figure 3.1). For purposes of managing pollock, the Western and Central areas are combined to allow improved management and better conservation of the pollock resource. For purpoes of managing sablefish, the Eastern Regulatory Area is divided into four districts: West Yakutat (140°W. longitude to 147°W. longitude), East Yakutat (137°W. longitude to 140°W. longitude), Southeast Outside (all waters of the FCZ east of 137°W. longitude), and Southeast Inside (all waters of the territorial sea east of 137°W. longitude and north of 54°30'N. latitude). This division is to protect localized sablefish stocks and is necessary to prevent overexploitation in the Eastern Regulatory Area.

(5) In Section 5.2.1, "Domestic Annual Capacity and Intent to Process," page 5-5, delete the first and second paragraphs and replace them with the following:

The domestic annual harvest in the Gulf of Alaska was reassessed in 1983. Queries were sent to U.S. processors who were asked to respond concerning their expected processing performance for the 1984 fishing year. The 1984 DAH estimates are given as an example in Table 5.3. Estimates of DAH will be revised following review of the fishery, on an annual basis.

In addition to the U.S. harvesting and processing capacity surveyed, at least eight U.S.-foreign joint ventures intend to operate in the Gulf of Alaska management area during 1984. These operations will buy pollock and other groundfish from American fishermen delivering directly to foreign processing ships in the FCZ. The catching and processing capacity identified in this plan for those ventures has been furnished by the eight joint U.S.-foreign firms active in developing those enterprises.

(6) In Section 5.2.2.1, "Delivered to U.S. Processors, DAP," page 5-12, delete the first two paragraphs and replace with the following paragraph:

Survey and reassessment methodologies are designed to provide results consistent with the other provisions of this plan and the intent of P.L. 95-354. The DAP values established by the survey are estimates for the 1984 fishery. However, since 1980, the annual domestic harvest delivered to domestic processors has not corresponded with estimates of DAP. This has been primarily due to the market for domestically produced groundfish products, which has been difficult to predict.

(7) In Section 5.2.2.2, "Delivered to Foreign Factory Ships," page 5-12, delete the first and second paragraphs and insert the following paragraph:

The performance of joint ventures have increased dramatically from 1,900 mt in 1980 to 17,000 mt in 1981, 77,000 mt in 1982 and 142,161 mt in 1983. Commitments from foreign purchases of U.S. caught groundfish will probably result in harvest in excess of 240,000 mt in 1984.

(8) In Section 6.1, "Departure from MSY to ABC for Biological Reasons," page 6-2, replace the third paragraph with the following text:

For purposes of managing pollock, the Western and Central Regulatory Areas were combined in 1984 to allow improved management and better conservation of the pollock resource. The 1984 pollock ABC for the combined Western and Central Regulatory Areas is at least 400,000 mt and could be as high as 500,000 mt.

The 1984 ABC value is primarily based on three sources of information, (1) an update of the catch-at-age analysis that includes an additional year of data, (2) NMFS research vessel surveys of 1983, and (3) the results from an age structured model developed to forecast future levels of exploitable biomass given various harvest levels and future recruitment scenarios.

The update of the catch-at-age analysis was a report on the condition of the pollock resource in the Central and Western Gulf of Alaska by Alton and Deriso (1983) in the status of stocks document submitted by the U.S. to the INPFC at the end of October. In the report Alton and Deriso hypothesized from the 1983 survey results and growth data that pollock in the Western and Central areas make up one stock that primarily spawns in Shelikof Strait during winter months. Results from 1983 NMFS research vessel surveys show that spawning concentrations in other areas west of the eastern tip of Kodiak Island appear to be minor. After spawning pollock leave Shelikof Strait and disperse along the continental shelf where foreign fleets fish in the summer and fall months. There is little information to judge whether pollock south of the Fox Islands and west of Unimak Pass, or the reported concentration of pollock south of the Kenai Peninsula are part of the same stock.

The results of the updated catch-at-age analysis showed an increase in exploitable biomass for the years 1976 to 1982. This increase in abundance is attributable to the recruitment of five consecutive strong year classes (1975-79) to the 1979-82 fisheries. The average exploitable biomass for the updated analysis was 1,430,000 mt with a standard deviation of 220,000 mt compared to the 1982 assessment of 1,040,000 mt with a standard deviation of 448,000 mt. The 1982 analysis did not include the 1982 fishery data.

The 1983 NMFS acoustic surveys in the Shelikof region gave an average biomass of 3.8 million mt in 1981 and 2.4 million mt in 1983. If 180,000 mt from the bottom trawl survey is added, the total biomass becomes 2.6 million mt in 1983 which converts to an exploitable biomass of about 2.0 million mt. This is less than the 1982 exploitable biomass value of 2.6 million mt, estimated by the catch-at-age analysis, but still greater than the 1.4 million ton average exploitable biomass for the years 1976-82.

The results of the acoustic surveys in the Shelikof region suggests that pollock biomass has declined from 1981 to 1983 (no survey was made in 1982). Using the average biomass from the first two surveys of each of these years, the decline is from 3.8 million mt in 1981 to 2.4 million mt in 1983. Catch-at-age analysis has shown a continued increase in biomass in 1982. Although the 1983 acoustic survey estimates suggest a decline in abundance between 1981 and 1983, the stock in 1983 is still considered to be at a high abundance level, comparable to levels in 1980 and 1981.

An age structure model has recently been developed to forecast or project future levels of exploitable biomass given various levels of OY and future recruitment patterns. The model does not incorporate a stock recruitment relationship. The model is structured to track both the winter fishery on the spawning concentrations and the summer/fall fishery on the feeding grounds. Input parameters of natural mortality and growth are similar to those used in the catch-at-age analysis. Initial biomass estimates and age selectivity coefficients are taken from the results of catch-at-age analysis. Testing of the model generally reproduced the biomass time series from the catch-at-age analysis using the estimates of recruitment and the annual catch figures for 1976-82. However, the model is not yet completely validated.

The magnitude of the incoming 1980 year class as 4 year olds in 1984 is uncertain at this time. The 4 year old year classes have been important contributors to the fishery since 1979. At age 3, the 1980 year class made up 3-4% of the catch in the 1983 Shelikof fishery. A similar percentage was found for the 1983 research surveys in the Shelikof region. Preliminary age data from the 1983 foreign fishery showed the 1980 year class to make up 15.3% of the catch by numbers. This value is similar to the value observed for the 1977-79 year classes that we know are relatively strong.

Due to the uncertainty of the strength of the 1980 year class, the forecasting model was run with four different recruitment scenarios for 1983-86 and five OY options. The five OY options were 300,000 mt, 350,000 mt, 400,000 mt, 450,000 mt, and 500,000 mt for the 1984-86 fisheries. The winter fishery on the spawning concentration was set at 200,000 mt. The summer catch was the remainder of OY - 200,000 mt.

The first recruitment scenario is very optimistic. The abundance of the 1980-84 year classes entering the fishery in 1983-86 at age 3 was assumed to be 3 billion fish. This is similar to the recruitment estimated for the strong 1976-79 year classes. For the second scenario recruitment was set at 2 billion fish, which is equivalent to the average of the 1973-79 year classes. The third scenario is a worst case in which recruitment was set at 1 billion, approximately twice the magnitude of the poor 73 and 74 year classes. The last scenario assumed the 1980 year class will be 1 billion fish followed by 3 billion fish for 1981-83 year classes. The results of these forecasts are summarized in Table 6.1.

Although the projections for biomass at the beginning of 1985 are relatively constant over the range of OY values considered for 1984, the results of these forecasts suggest that a decline in the exploitable biomass can be expected unless recruitment continues at the high level of 3 billion fish annually.

The projected levels of biomass are more dependent on the recruitment levels than the projected catches. Only at the low recruitment level did the exploitable biomass eventually drop below the 1976-82 average exploitable biomass at all OY levels considered. The conclusion from these projections is that the acceptable biological catch for 1984 is at least 400,000 mt and could be as high as 500,000 mt. ABC in 1985 will depend on the magnitude of the 1980 and 1981 year classes. The 1985 ABC should be reevaluated in the fall of 1984, when new information from the 1984 fishery and surveys becomes available. The 1984 OY has been set at the lower end of the ABC range, or 400,000 mt of pollock. This value was selected as the amount of fish needed to meet the requirements of the fishery. The lower end of the ABC range was also chosen because of concerns that a higher pollock OY might lead to unacceptable catches of incidentally caught species.

(9) In Section 6.2, "Departure from ABC for socioeconomic Reasons," page 6-8, insert the following text after the second paragraph:

Pollock -- The 1984 OY has been set at the lower end of the ABC range, or 400,000 mt of pollock. This value was selected as the amouny of fish needed to meet the requirements of the fishery. The lower end of the ABC range was

also chosen because of concerns that a higher pollock OY might lead to unacceptable catches of incidentally caught species.

(10) For editorial purposes, the following change is being made:

In Section 8.3.2.1, Foreign Season, Gear, Area, and Catch Restrictions, page 8-6, subsection (C) "Time-area closures," remove part 3(c) from page 8-11 and replace it as part 1(c) on page 8-8.

(11) Add the following to Section 10.0, Part 4.7, "Current Status of Stocks":

Alton, M. and R. Deriso, 1983. "Condition of Gulf of Alaska Pollock Resource." In. Condition of groundfish resources of the Gulf of Alaska region assessed in 1983. (G. Stauffer editor). U.S. Dept. of Commerce, Nat'l. Mar. Fish. Serv., Northwest and Alaska Fisheries Center, Seattle. Unpubl. rep.

TABLE 4.2

The Derivation of Optimum Yield (OY) for
Gulf of Alaska Groundfish Resources (1,000s mt)

		Pollock	Pacific Cod	Flounders	Pacific Ocean Perch	Sablefish	Atka Mackerel	Other Rockfish	Squid	Sebastolobus Sp.	Other Species
Exploitable Biomass	WESTERN	357-713	40-79	220	unknown	unknown		unknown		unknown	
	CENTRAL	595-1,191			"	"		"		"	
	EASTERN	89-177			"	"		"		"	
	TOTAL	1,041-2,081							(110)[1]		
Maximum Sustainable Yield (MSY)	WESTERN										
	CENTRAL										
	EASTERN										
	TOTAL	168.8-334	88-177	67	125-150	22-25	(33)[1]	7.6-10.2	5.0	3.75	
Equilibrium Yield (EY) (When stock incapable of producing MSY)	WESTERN					2,225					
	CENTRAL					4,075					
	EASTERN					4,665-6,330					
	TOTAL	N/A	N/A	N/A	50	10,965-12,630	N/A	N/A	N/A	N/A	
Allowable Biological Catch (ABC)	WESTERN	500.0[2]	16.5	20.8	5.3	1.67	4.7				
	CENTRAL		33.5	30.6	15.7	3.06	20.8				
	EASTERN	16.6[3]	10.0[3]	16.6[3]	0.875	3.5-4.75	3.2				
	TOTAL	416.6[3]	60.0[3]	67.0[3]	21.875	8.23-9.480	28.7[4]	7.6	5.0[5]	3.75	18.752
Optimum Yield	WESTERN	400.0[2]	16.6	10.4	2.7	1.67	4.7	---------- (OY apportioned Gulf-wide) ----------			
	CENTRAL		33.5	14.7	7.9	3.06	20.8	"	"	"	"
	EASTERN	16.6	9.9	8.4	0.875	3.5-4.75	3.2	"	"	"	"
	TOTAL	416.6	60.0	33.5	11.475	8.23-9.480	28.7	7.6	5.0	3.75	18.752

1/ From unsubstantiated Soviet reports.
2/ For purposes of pollock management, OY for the Western and Central Regulatory Areas are combined.
3/ Apportioned on basis of trawl survey data.
4/ Apportioned on basis of 1973-75 soviet catch and 1978 Japanese catch.
5/ Apportioned equally to each INPFC area.

TABLE 5.3

Historical Data
Initial 1984 Estimated Domestic Annual Processing (DAP),
Joint Venture Processing (JVP), and Domestic Annual Harvest (DAH)
of Groundfish from the Gulf of Alaska in Metric Tons

Species	DAP	JVP	DAH
Pollock	9,300	210,300	219,600
Pacific Cod	12,320	14,850	27,170
Flounders	400	8,630	9,030
Pacific Ocean Perch	1,080	3,770	4,850
Other Rockfish	395	500	895
Sablefish	5,374	490	5,864
Atka Mackerel	400	1,900	2,300
Squid	100	10	110
Sebastolobus sp.	150	50	200
Other Species	100	400	500
TOTAL	29,619	240,900	270,519

Note: DAH will be updated annually as described in Section 5.2.2.

TABLE 6.1 - Projections of exploitable biomass[1/] of pollock in the Western and Central Gulf for 1984 to 1986 for 5 levels of OY and 4 recruitment scenarios.

RECRUITMENT SCENARIO	YEAR	OPTIMUM YIELD OPTIONS[2/] 300,000 t	350,000 t	400,000 t	450,000 t	500,000 t
1. 3 billion fish in 80-84 year classes at age 3.	1983	2,018,000	2,018,000	2,018,000	2,018,000	2,018,000
	1984	2,201,000	2,201,000	2,201,000	2,201,000	2,201,000
	1985	2,223,000	2,188,000	2,153,000	2,118,000	2,083,000
	1986	2,204,000	2,142,000	2,080,000	2,019,000	1,956,000
2. 2 billion fish in 80-84 year classes at age 3.	1983	1,983,000	1,983,000	1,983,000	1,983,000	1,983,000
	1984	2,029,000	2,029,000	2,029,000	2,029,000	2,029,000
	1985	1,836,000	1,800,000	1,765,000	1,728,000	1,693,000
	1986	1,655,000	1,593,000	1,529,000	1,467,000	1,405,000
3. 1 billion fish in 80-84 year classes at age 3.	1983	1,947,000	1,947,000	1,947,000	1,947,000	1,947,000
	1984	1,858,000	1,858,000	1,858,000	1,858,000	1,858,000
	1985	1,449,000	1,412,000	1,375,000	1,338,000	1,302,000
	1986	1,105,000	1,040,000	975,000	911,000	848,000
4. 1 billion fish in 1980 year class, 3 billion fish in 81-84 year classes	1983	1,947,000	1,947,000	1,947,000	1,947,000	1,947,000
	1984	1,929,000	1,929,000	1,929,000	1,929,000	1,929,000
	1985	1,795,000	1,759,000	1,724,000	1,689,000	1,654,000
	1986	1,879,000	1,816,000	1,754,000	1,692,000	1,631,000

1/ Estimated biomass in tons on January 1.

2/ Winter fishery = 200,000 t
Summer fishery = OY - 200,000 t

TABLE 6.3

1984 GULF OF ALASKA GROUNDFISH OY, DAH, DAP, JVP, RESERVES AND TALFF BY AREA (MT)[1/]

SPECIES	AREA	OY	RESERVE	DAP	JVP	DAH	TALFF
POLLOCK	W/C	400,000	80,000	9,000	210,300	219,300	100,700
	E	16,600	3,320	300	0	300	12,980
TOTAL		416,600	83,320	9,300	210,300	219,600	113,680
PACIFIC COD	W	16,560	3,312	500	250	750	12,498
	C	33,540	6,708	11,700	14,600	26,300	532
	E	9,900	1,980	120	0	120	7,800
TOTAL		60,000	12,000	12,320	14,850	27,190	20,830
FLOUNDERS	W	10,400	2,080	0	10	10	8,310
	C	14,700	2,940	100	8,620	8,720	3,040
	E	8,400	1,680	300	0	300	6,420
TOTAL		33,500	6,700	400	8,630	9,030	17,770
PACIFIC OCEAN PERCH	W	2,700	540	0	1,770	1,770	390
	C	7,900	1,580	620	2,000	2,620	3,700
	E	875	175	460	0	460	240
TOTAL		11,475	2,295	1,080	3,770	4,850	4,330
SABLEFISH	W	1,670	334	100	200	300	1,036
	C	3,060	612	1,360	290	1,650	798
	W. Yak	1,680	336	1,344	0	1,344	0
	E. Yak	850-1,135	0	850-1,135	0	850-1,135	0
	SE Outside	470-1,435	0	470-1,435	0	470-1,435	0
	SE Inside[2/]	500	0	0	0	500	0
TOTAL		8,230-9,480	1,282	4,124-5,374	490	3,464-4,714	1,834
ATKA MACKEREL	W	4,678	936	400	400	800	2,942
	C	20,836	4,167	0	1,500	1,500	15,169
	E	3,186	637	0	0	0	2,549
TOTAL		28,700	5,740	400	1,900	2,300	20,660
OTHER ROCKFISH	GW	7,600	1,520	395	500	895	5,185
SEBASTOLOBUS SP.	GW	3,750	750	150	50	200	2,800
SQUID	GW	5,000	1,000	100	10	110	3,890
OTHER SPECIES	GW	28,780	5,756	100	400	500	22,524
GRAND TOTAL		604,385	120,363	29,619	240,900	270,519	213,503

1/ This table does not reflect initial reserve apportionments to TALFF as published in the Federal Register on January 9, 1984 (49 FR 1061).

2/ Managed by State of Alaska; not included in totals.

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